

ABSTRACT OF THE DISCLOSURE

5 Magnetoresistive devices are formed on the insulating surface of a substrate made of silicon. The devices are connected in series through an insulating film using a wiring layer formed on the surface of the substrate. An insulating film for passivation is formed to cover the devices and the wiring layer. A magnetic shield layer of Ni-Fe alloy is formed on the passivation insulating film through an organic film for relieving thermal stress to cover one of the devices. After removal of the sensor chip containing the magnetoresistive devices and other components from the wafer, the chip is bonded to a lead frame through an Ag paste layer by heat treatment. Preferably, the magnetic shield layer is made of a Ni-Fe alloy having a Ni content of 69% or less.